

July 12, 1932.

E. W. BRADY
DETACHABLE INSULATOR
Filed July 14, 1928

1,867,206

Fig. 1.

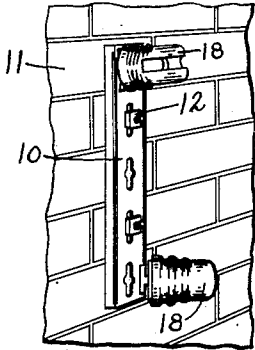


Fig. 2.

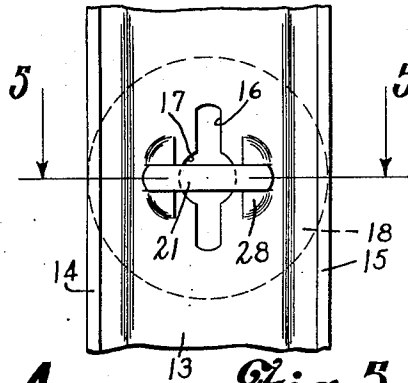


Fig. 3.

Fig. 4.

Fig. 5.

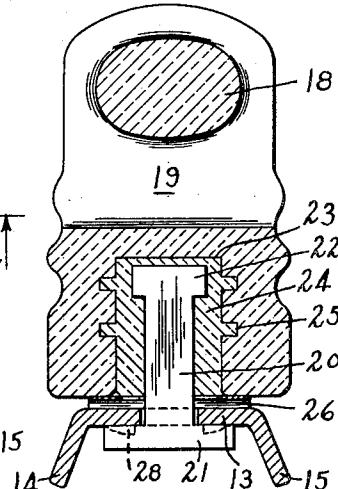
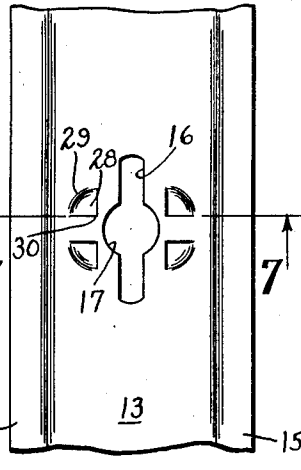
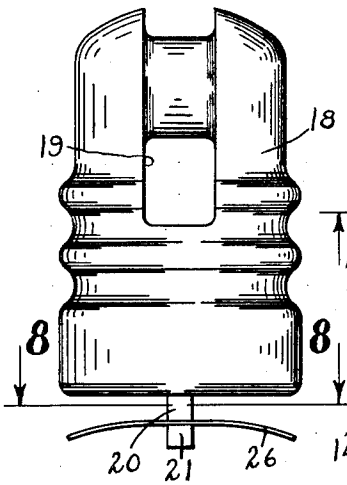
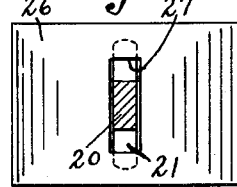
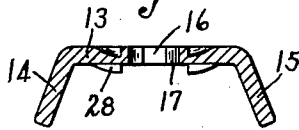
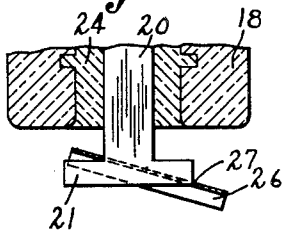


Fig. 6.

Fig. 7.

Fig. 8.



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DETACHABLE INSULATOR

Application filed July 14, 1928. Serial No. 292,710.

This invention relates to detachable insulators, and more particularly to detachable insulator heads, which may be readily and easily attached to and detached from a supporting member. This supporting member may be what is termed a wall bracket, or a bracket-like plate adapted to be secured to a wall or building, or it may take the form of a so-called lamp lead, which usually comprises a member adapted to be secured to a pole, often in the form of a threaded pin or screw.

In the past, it has been proposed to make insulator heads which are adapted to be detachably secured to a house or wall bracket by providing these heads with a threaded member, which may be screwed into threaded openings in the bracket. This construction is subject to certain disadvantages in that it is difficult to securely fix it in place without damage to the insulating part of the fixture, and it often occurs that the threaded portions become rusted so that it is hard to unscrew and detach the head from the bracket. Moreover, it sometimes occurs that the threads become mutilated in handling, which renders the parts difficult of assembly.

One object of this invention is to provide a detachable insulator head which may be attached to and detached from a supporting member or bracket, more readily and with less effort than is the case with similar articles now available.

Another object of the invention is to provide a detachable insulator head which may be inserted in place by a longitudinal thrust to insert a part of the head through an opening in the bracket, and thereafter secured in place by a rotary motion.

Another object of the invention is to provide an insulator supporting member having a longitudinal slot and an insulator head having a part secured thereto and projecting therefrom, which part is provided with a transverse foot piece which may be inserted through the slot and thereafter turned so as to lie transversely of the slot to prevent accidental displacement of the parts.

A still further object of the invention is to provide an insulator head which may be attached to a supporting member by a combined

longitudinal thrust and rotary motion, together with means to firmly fix the head in place after it has been attached to the supporting member.

To these and other ends the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawing:

Fig. 1 is a perspective view of a supporting member in the form of a house bracket carrying detachable insulator heads embodying my invention.

Fig. 2 is a fragmentary rear elevational view of a bracket with the head attached thereto.

Fig. 3 is a side elevational view of the detachable head.

Fig. 4 is a view similar to Fig. 2, showing the bracket alone.

Fig. 5 is a sectional view on line 5—5 of Fig. 2.

Fig. 6 is a fragmentary sectional view of the detachable head.

Fig. 7 is a sectional view of the bracket on line 7—7 of Fig. 4.

Fig. 8 is a sectional view on line 8—8 of Fig. 3.

To illustrate a preferred embodiment of my invention, I have shown what may be termed a house or wall bracket 10, attached in this instance to a wall or the side of a building 11, by means of bolts 12 secured in the wall and passing through openings in the bracket in the usual way. The bracket 10, as shown more particularly in Figs. 2, 4, and 7, is of substantially U-shaped form in cross-section so as to present a relatively flat supporting base portion 13, spaced from the wall or building by the side web portions 14 and 15. In the part 13 are provided elongated openings 16, having enlarged central portions 17. These openings may be employed to receive the bolts 12, as shown in Fig. 1, as well as to receive a part of the detachable insulator heads, as will be more fully explained hereinafter.

The insulator head comprises the insulating member 18, formed as usual of insulating material, and in the form shown provided

with an opening 19 through which the lead wire may pass. In order to provide means upon the insulator head which will, in cooperation with the openings 16 of the bracket 10, make possible the attaching and detaching of the insulator head and bracket with ease and facility, I secure to the insulating member 18 a securing member which will project from the base of the insulating member to be received through the opening 16 and contact with the rear face of the part 13 of the bracket.

In the form illustrated, this member, as shown in Fig. 5, comprises a body or stem portion 20, having a base 21 extending transversely from the body portion and provided at its upper end with a head 22, which, while smaller than the base portion 21 in the particular embodiment illustrated, nevertheless extends transversely from the body portion. The opening or recess 23 extends through the lower surface of the insulator, and the head and a part of the body of the securing member is adapted to be received within this opening to a sufficient extent to be rigidly and firmly secured therein, with the transverse base portion and a part of the body portion projecting from the lower end of the insulator.

The securing member may then be fixed in place by the opening or recess 23 being filled with cementitious material, lead or the like, 24, which will also preferably be run into channels 25 formed in the insulator head and communicating with the opening 23. It will be apparent that the material 24 will firmly adhere to the insulator, and owing to the fact that it overlies the head 22, will fix the securing member firmly thereto.

I also provide upon the stem or body portion 20, a washer 26, which is preferably formed of a comparatively thin sheet of some resilient material and is of flat shape except that it is slightly bowed in a longitudinal direction, as shown in Fig. 3, for a purpose which will be hereinafter explained. This washer member 26 is, as shown in Fig. 8, provided with a rectangular opening 27, which fits loosely about the stem portion 20, but which will be of such a size as to connect this member non-rotatably to the member 20.

As shown in Figures 6 and 8, the slot 27 is of a sufficient length so that if one end of this slot is brought up against the edge of the body member 20, the other end may pass outside of the edge of the foot portion 21 of the securing member. Thus, the washer may be assembled upon the securing member after the latter is secured to the insulator. It will be understood, however, that the slot 27, while loosely fitting the stem 20, is not of sufficient width to permit the washer to turn upon the stem.

In order to prevent the insulator head from becoming accidentally detached from the bracket, I may provide projecting portions

upon the rear face of the part 13 to engage the foot 21 to hold it against rotation. As shown more especially in Figs. 4 and 7, these projections may take the form of struck out portions 28, and it will be convenient to provide four of such projections which merge into the part 13 at their bases 29, but which are provided with vertices 30 opposite the bases, which project rearwardly to a sufficient extent from the part 13 to engage and hold the base portion 21 in place.

The operation of my device is as follows. After the parts of the detachable head have been assembled, as shown in Fig. 3, it will be understood that the washer 26 is loosely held upon the stem or body 20 of the securing means, but is non-rotatable thereon, and that this washer is of spring or resilient material so that it will tend to resist being flattened or distorted from its bowed shape. In order to secure the insulator head to the bracket, the former is turned to such a position that the transverse foot member 21 will pass through the opening 16, with the projecting part of the stem member 20 entering the enlarged part 17 of the slot. When inserting the securing member through the opening 16, sufficient pressure is exerted upon the insulator head to flatten out the resilient washer 26 to some extent so that the tendency of this washer to return to shape will hold the head firmly in position. After the foot member 21 has been inserted through the opening 16 to a sufficient extent to clear the edges of the opening, the insulator head is rotated through an angle of 90°, in the case of the particular embodiment shown. During this rotation the member 21 rides up over certain of the projections 28 and, as shown in Fig. 2, at the end of the partially rotative movement, will drop between two opposing ones of these projections and be drawn tightly against the rear face of the part 13 by the action of the spring washer 26. The head will now be firmly fixed in place so that its accidental displacement will be impossible. Any tendency of the head to rotate so as to again bring the foot portion 21 into registration with the slotted opening 16 will be resisted by the engagement of the part 21 with the edges of the projections 28, and movement of the member 21 rearwardly to clear these projections will be resisted by the spring washer 26.

When it is desired to detach the head from the bracket, sufficient pressure must be exerted thereon in a direction to flatten out the spring washer 26 and move the member 21 inwardly or rearwardly to a sufficient extent to clear the projections 28, when free rotation of this member into registration with the slot 16 will be permitted, and thereafter the member 21 removed from the bracket in a longitudinal direction.

It will be understood that when the mem-

ber 21 is inserted through the slot 16, the bowed axis of the washer 26 will lie transversely of the bracket 10, but this member will, of course, be rotated with the insulator head until in the final position of the latter, the washer 26 will extend longitudinally of the bracket so that the bowed edges will properly engage with the flat surface of the portion 13.

I find it desirable to make all of the openings in the bracket 10 of the same form as the opening 16, shown in Fig. 4, so that such openings may be used interchangeably for the bolts 12 or for securing the insulator heads in place.

It will be obvious that I have provided an insulator head which will be readily and easily attached to and detached from a supporting member, and at the same time will be rigidly and firmly secured to the supporting member so that there will be no play therebetween, nor any danger of accidental displacement.

While I have shown and described some preferred embodiments of my invention, it will be understood that it is not to be limited to all the details shown, but is capable of modification and variation within the spirit of the invention and within the scope of the appended claim.

What I claim is:

An insulator head comprising an insulating member and a securing member permanently attached thereto, said securing member projecting from the insulating member and being provided with a stem and transversely extending oppositely disposed foot portions at the end of the stem, and a spring washer loosely mounted on said securing member, said washer having an opening therein through which said foot portion may be passed, the opening in the washer being of greater length than the distance between an outer end of one of the foot portions and the remote side of the stem and of less length than the distance between the outer ends of the foot portions.

In witness whereof, I have hereunto set my hand this 11 day of July, 1928.

EDMUND W. BRADY.